

Serial No. 09/597,371
Attorney Docket No. E0889
Firm Reference No. AMDSP0354US

Reply to Office Action Dated April 16, 2004
Reply Dated July 16, 2004

REMARKS

Following entry of this amendment, claims 1-22 and 24-25 will be pending. Claim 23 has been cancelled without prejudice or disclaimer. Claims 24 and 25 have been amended to depend from claim 21. Claims 1 and 11 have been amended, without change in scope, to avoid indefiniteness. In claim 1, the term "them" has been replaced with the term "the special frames", the first occurrence of the term "device" has been replaced with the term "apparatus" and the term "frames incoming" has been replaced with the term "incoming frames". In claim 11, the term "a driver arrangement" has been replaced with the term "a device driver arrangement". Claim 21 has been amended to include the feature of cancelled claim 23. It is believed that the amendments contained herein raise no new issues, do not require an additional search and place the application in a better condition for allowance and/or appeal. Accordingly, entry of the amendment is considered proper.

I. REJECTION OF CLAIMS UNDER 35 U.S.C. § 103(a)

Claims 1-25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cheng, U.S. Patent No. 6,459,705 ("Cheng") in view of Shim, U.S. Patent No. 6,088,723 ("Shim"). Withdrawal of the rejection is respectfully requested for at least the following reasons.

Cheng discloses a network interface 120 for a host computer system 100. A host computer 100 is connected to an external computer network via an external network interface. See, for example, Abstract and FIG. 1. In a first configuration, the external network interface includes a media independent interface (MII) 106 connected to a physical layer 108, which provides a connection to the external computer network. In the first configuration, the external network interface also includes a media access control (MAC) layer 102 connected to the physical layer 108 through a media independent interface (MII) 106. The MAC layer 102 interfaces with the host computer's operating system to allow the host computer to send and receive network data. See, for example, FIG. 1 and Col. 3, lines 19-27.

Cheng further discloses a second configuration that includes a system management controller 110. The system management controller 110 includes a network interface 120. The network interface 120 includes a transmit MAC layer 122. The transmit MAC layer 122

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interfaces with the above-identified physical layer 108 over the MII 106. See, for example, Col. 3, lines 27-32. However, Cheng does not disclose a method of communicating **within** a network interface apparatus using **special frames** as recited in claim 1.

That is, amended claim 1 recites a method of communicating **within** a network interface apparatus that includes, *inter alia*, creating **special frames** in a first part of the apparatus, the special frames including an identifier that distinguishes the **special frames** from **other frames** passing through the apparatus; sending the special frames from the first part to a second part of the apparatus through at least a media access controller of the apparatus, the second part including a physical layer device; identifying the special frames from among incoming frames to the second part, the identifying including examining the incoming frames for the presence of the identifier; and extracting physical layer device control information from the special frames at the second part.

Cheng does not teach or suggest such a method of communicating **within** a network interface apparatus. Cheng, at least in the sections relied on by the Examiner, does not disclose creating **special frames** for communicating within a network interface apparatus. An example of a **special frame** format is illustrated in FIG. 2 of the specification. The exemplary special frame includes a control information field 70 that takes the place of a payload or a data field in an ordinary frame (other frame). See, for example, Specification at page 9, line 28 to page 10, line 8. However, since the special frames passes through the existing legacy MAC 24, the special frames must meet any minimum frame length requirements for the legacy MAC. See, for example, Specification at page 9, lines 20-27. In contrast, Cheng discloses when the host computer enters a sleep state, the controller 110 activates an isolation block 104. The activation of the isolation block 104 disconnects the MAC layer 102 from the physical layer 108, and enables the network interface 120 to transmit and receive data over the external network. See, for example, Col. 3, lines 32-38.

Further, Cheng does not disclose special frames including an identifier that distinguishes the **special frames** from **other frames** passing through the apparatus. To the contrary, Cheng discloses the transmission of ordinary frames (other frames) through an apparatus to an external network, i.e., the ordinary frames of Cheng pass through the controller 110, the MII 106 and the

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physical layer 108 to the external network. More specifically, a buffer manager 126 reads the frame data from the transmit buffer 132. The transmit buffer manager 126 then provides the data to the transmit MAC 122. The transmit MAC 122 adds an appropriate preamble and start of frame delimiter to the data and provides it to the MII 106 for network transmission by the physical layer 108. The transmit buffer manager 126 continues to read data from the transmit buffer 132 until its contents are empty. The buffer manager 126 continues to provide the data to the transmit MAC 122 for transmission over the network. See, for example, Col. 3, lines 38-50.

Further, Cheng does not disclose identifying the special frames from among frames incoming to the second part, the identifying including examining the incoming frames for the presence of the identifier; and, as admitted by the Examiner, extracting physical layer device control information from the special frames at the second part.

Shim does not make up for the deficiencies of Cheng. Shim like Cheng discloses the transmission of ordinary frames (other frames) through an apparatus. Specifically, Shim discloses the frame control unit 9 extracts a physical layer data, that is, Cv value from the ISDN frame to send it to the HDLC unit 7, code-converting the physical layer data and sending it to an ISDN telephone 13 through the matching unit 11, performing the reverse process. The ISDN frame is the ordinary frame (see above) being transmitted through the apparatus. The ISDN frame is not a special frame containing control information. Since Cheng and Shim do not teach or suggest all the features of claim 1, claim 1 and the claims that depend therefrom are patentable over Cheng and Shim, alone or in combination.

Amended claim 11 recites a network interface apparatus that includes, *inter alia*, a device driver arrangement operatively coupled to the media access controller, the device driver arrangement including a device driver operatively configured to communicate with the media access controller, and an intermediate driver operatively configured to communicate control information to the network medium interface.

Cheng does not disclose a device driver arrangement operatively coupled to a media access controller. Contrary to the Examiner assertions, the isolation block 104, the MII 106 and the physical layer 108 disclosed by Cheng does not create a device driver arrangement as recited in claim 11. The isolation block 104 isolates the MAC layer 102 from the physical layer 108

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when it is energized by the controller 110 when the host computer enters a sleep state. See, for example, Col. 3, lines 33-38 and Col. 4, lines 27-30. Thus, Cheng does not disclose the device driver arrangement including a device driver operatively configured to communicate with the media access controller. Shim does not make up for the deficiencies of Cheng. Therefore, claims 11-20 are patentable over Cheng and Shim, alone or in combination.

Amended claim 21 recites a network interface apparatus that includes, *inter alia*, a means for controlling the physical layer device by passing control information through the media access controller, wherein the means for controlling includes means for creating and sending special frames which include the control information. Cheng, as discussed above with regard to amended claim 1, does not disclose a means for controlling that includes a means for creating and sending special frames which include the control information. Shim, also as discussed above with regard to amended claim 1, does not make up for the deficiencies of Cheng. Thus, claims 21-25 are patentable over Cheng and Shim, alone or in combination.

II. CONCLUSION

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present invention.

Any fee(s) resulting from this communication is hereby authorized to be charged to our Deposit Account No. 18-0988; Our Order No. E0889 (AMDSP0354US).

Respectfully submitted,
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